



U.S. Geological Survey
2000 - 2001 Public Lecture Series

at Caltech

Living With Earthquakes in Southern California
Lucy Jones, USGS

Enjoy Earthquakes 101 with southern California's "Seismo-Mom". We just happen to live right next to the boundary between the North American Plate and the Pacific Plate. We know that boundary as the San Andreas Fault. Some day this fault will produce a large earthquake, but other faults all over southern California produce an average of 30 earthquakes each day.

We will talk about foreshocks, mainshocks and aftershocks in southern California, and we will cover all the things you should know about earthquakes as a resident of earthquake country.

October 24 -Tue

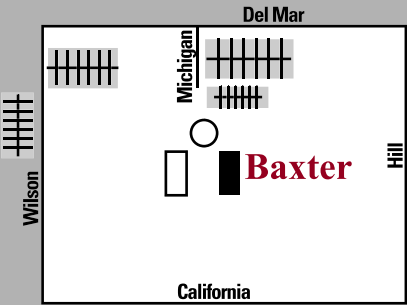
Did You Feel It?
David Wald, USGS

The most common information available immediately following an earthquake is the location and magnitude. However, what we really want to know is where the shaking was felt, and in the case of emergency response, where it shook the most.

Two new systems can now answer these questions within minutes following an earthquake. ShakeMaps show the distribution of earthquake shaking in southern California as measured by the seismic instruments. Community Internet Intensity Maps also show the areas of greatest shaking, but they require the input of Internet users to show where the earthquake was felt and how strongly it shook. Both are available on the Internet.

We will talk about how each of these maps are created, what they can be used for, and how you can help.

March 15 -Thur



The Music of Earthquakes
Andy Michael, USGS

The Music of Earthquakes mixes performance and lecture, music and science, acoustic instruments and computer generated sounds.

A musician controls the source of the sound and the path it travels through their instrument in order to make sound waves that we hear as music. An earthquake is the source of waves that travel along a path through the earth until reaching us as shaking. It is almost as if the earth is a musician and people, including seismologists, are the audience who must try to understand what the music means.

By listening to both music and the audio playbacks of the earth shaking, we will explore this analogy and find new ways to learn about the earth, earthquakes, musical instruments and music.

January 18 -Thur

Pent-up Stress Puts the Squeeze on L.A.
Ken Hudnut, USGS

When an earthquake happens, we 'feel the earth move under our feet. But did you know that the earth is moving under our feet all the time?

Every day we check the positions of over 200 Global Positioning System (GPS) monitoring sites to monitor the slow ongoing movements that load up stress on faults and eventually lead to earthquakes. After an earthquake, GPS is also used to measure the resulting permanent deformation.

The Southern California Integrated GPS Network (SCIGN) is the largest and most dense network of continuously operating GPS stations in the U.S. GPS has recently become more widely used in our society, but can your GPS unit tell you where you are within one millimeter? We will discuss how SCIGN is allowing us to improve our mapping of seismic hazards and to study deformation of the earth.

May 1 -Tue

All lectures are free and start at **8pm in Baxter Lecture Hall** on Caltech campus. Plenty of free parking is available.